Contamination at Base31

Historical Use and Evidence

Disclaimer and Legal Waiver

This report has been prepared for **informational and advocacy purposes only.** It summarizes publicly available information, general scientific knowledge, and reasonable concerns related to potential PFAS (per- and polyfluoroalkyl substances) contamination at Base31 in Prince Edward County. The authors are **not providing legal, environmental engineering, or health advice.** Readers should not rely solely on this report for decision-making. Instead, they should seek independent professional advice from qualified environmental consultants, legal counsel, and public health authorities before taking any action or making investment or policy decisions. While every effort has been made to ensure the accuracy of the information presented, the authors make **no representation or warranty, express or implied,** regarding the completeness, accuracy, reliability, or suitability of the information contained in this report. The information is subject to change as new studies, data, or regulatory standards become available. By reviewing this report, the reader agrees that the authors, contributors, and publishers shall **not be liable for any direct, indirect, incidental, or consequential damages** arising from the use of, or reliance upon, the information contained herein. Any references to environmental or health risks are **general in nature** and do not constitute a site-specific risk assessment. Only a licensed environmental professional can determine site conditions through recognized investigative procedures. The opinions expressed are those of the authors in the context of civic dialogue. Readers are encouraged to consult the Ministry of the Environment, Conservation and Parks (MECP), the Municipality of Prince Edward County, and qualified experts for authoritative information and regulatory guidance.

Findings of Concern and Reassurance

Concerns:

- Localized groundwater contamination with petroleum hydrocarbons (PHCs, BTEX, PAHs) at former fuel storage sites.
- Lead contamination in soils at the former firing range and near Building 3.
- No PFAS testing has been publicly reported at Base31 to date, despite historical firefighting foam use.

Not Major Concerns:

- No evidence of widespread contamination beyond localized hot spots.
- Soil and groundwater across most of the site met environmental standards.
- Remediation completed for identified hotspots, with regulatory oversight in place.

Checklist for Prospective Homebuyers

1. Confirm whether a Record of Site Condition (RSC) has been filed for your lot.
2. Request Phase II ESA results specific to your subdivision/parcel.
3. Ask for documentation of remediation (tank removals, soil cleanup, verification sampling).
4. Clarify if any risk management conditions (e.g. no use of groundwater, vapor barriers) apply.
5. Request Designated Substances Survey for historic buildings being converted.
6. Ask whether PFAS testing has been done; if not, request confirmation it will be included.
7. Verify municipal water supply connection and soil quality in planned parks/gardens.
8. Ensure construction soil handling follows Ontario Excess Soil Regulations.

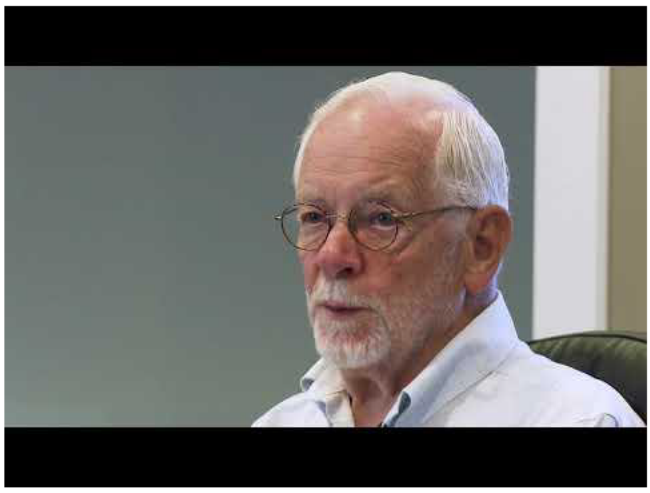
Questions for Prince Edward County

1. Has PFAS testing been conducted at Base31? If not, why not?
2. Have all areas of the site been assessed, not just hotspots?
3. What contaminants were identified, and what remedies completed?
4. Has MECP approved the Risk Assessment, and what is the status of Record of Site Condition filings?
5. What long-term monitoring will be conducted, and by whom?
6. How will the County ensure transparent communication of any future contamination findings?
7. Have all underground tanks, waste pits, and legacy hazards been removed?
8. How will soil be monitored and managed during future construction phases?

PFAS Contamination Risks at Base31

Per- and polyfluoroalkyl substances (PFAS), often called 'forever chemicals,' are a major concern at former military bases due to the widespread historical use of aqueous film-forming foams (AFFF) in firefighting training. These foams contained PFOS, PFOA, and related compounds that persist in the environment and readily migrate to groundwater.

Health Canada has established a new national drinking water objective of 30 ng/L for the sum of 25 PFAS (2024). Ontario has also provided interim guidance values, with provincial screening standards continuing to evolve. While public records for Base31 have documented petroleum hydrocarbons and lead contamination, no PFAS sampling data has been publicly reported to date. This represents a data gap given the site's history as an airfield.



Evidence from nearby CFB Trenton confirms PFAS contamination at former fire-training areas, fire halls, and maintenance facilities. It is reasonable to expect similar risks at Base31 where firefighting activities took place.

Groundwater is the main concern: PFAS are highly mobile and persistent, and once in the aquifer they can migrate and pose risks for generations. While Base31 homes are expected to be connected to municipal water rather than private wells, residents should request confirmation that municipal PFAS monitoring aligns with Health Canada's updated objective. A secondary concern is off-site migration of contaminated plumes into surrounding lands or water bodies.

Remediation options for PFAS are evolving. Proven approaches include granular activated carbon (GAC), ion-exchange resins, and high-pressure membranes, which can remove PFAS from contaminated water but produce residual waste that must be safely disposed. In-situ remedies, such as activated carbon barriers to immobilize plumes, are increasingly used. Emerging destruction technologies like electrochemical oxidation, plasma, and supercritical water oxidation show promise but are not yet widely deployed.

For Base31, the priority should be targeted PFAS sampling at known high-risk areas (former fire-training pads, fire halls, drainage pathways) and full delineation of any plumes found. If contamination is confirmed, a remedial action plan must address both source zones and groundwater, with clear oversight from the Ontario Ministry of the Environment, Conservation and Parks (MECP). Prospective residents should insist on disclosure of PFAS testing results, inclusion of PFAS in risk assessments, and transparency on institutional controls to ensure safe redevelopment.

PFAS Contamination Risks at Base31: Long-Term Implications for Residents and Municipal Liability

Introduction

Base31, the redevelopment of the former Camp Picton air base in Prince Edward County, is slated for thousands of new homes and mixed-use community growth. While petroleum hydrocarbons and lead contamination have been documented and partly remediated, one glaring omission stands out: **No PFAS testing report has been publicly disclosed to date.**

Per- and polyfluoroalkyl substances (PFAS), commonly known as "forever chemicals," were widely used in firefighting foams (AFFF) at military bases and airports from the 1950s onward. Given Base31's history as a military airfield with fire training and aircraft fueling operations, the likelihood of PFAS contamination in soil and groundwater is significant.

Failure to address this risk poses potential **long-term health impacts for residents** and **substantial liability exposure** for both the Municipality of Prince Edward County and the Ontario Ministry of the Environment, Conservation and Parks (MECP).

Why PFAS Matter

- **Persistence**: PFAS do not break down in the environment; once present, they accumulate in soil and water for decades or longer.
- **Mobility**: PFAS readily migrate through groundwater, meaning a small release at a fire-training pad can impact aquifers far beyond the immediate site.
- **Bioaccumulation**: PFAS build up in human and animal tissues, leading to long-term exposure even at low concentrations.
- **Health Risks**: Studies link PFAS exposure to thyroid disease, immune system suppression, liver damage, developmental effects in children, and increased risk of cancers (e.g., kidney and testicular).
- **Regulatory Thresholds**: Health Canada's new (2024) drinking water objective is **30 ng/L for the sum of 25 PFAS compounds**. Some U.S. states have set even stricter standards.

Likely Exposure Pathways at Base31

1. **Groundwater Contamination** – If PFAS are present in aquifers beneath Base31, there is potential for plume migration beyond the property. While new homes are expected to use municipal water, surrounding rural properties on private wells could be impacted.

2. **Soil and Dust Contact** – PFAS residues in soils, especially near old fire-training areas, can be disturbed during construction, generating dust inhaled or ingested by workers and residents.

3. **Surface Water Runoff** – Stormwater management ponds could become PFAS reservoirs if construction mobilizes contaminated soils, leading to ecological exposure downstream.

4. **Long-Term Unknowns** – PFAS contamination can remain undetected for decades, only surfacing once residents experience unexplained health issues or wells test above guidelines.

Why MECP and Council Should Be Concerned

- **Regulatory Oversight**: MECP has a duty to ensure redevelopment of contaminated sites meets environmental standards before land-use changes to residential. Allowing approvals without PFAS testing undermines the credibility of Ontario's brownfield remediation system.

- **Liability for Residents**: If PFAS are later detected above safe thresholds, homeowners could face health risks and diminished property values. Without upfront disclosure and testing, lawsuits against the developer, County, and Province are almost inevitable.

- **Financial Costs**: PFAS remediation is extremely costly. Pump-and-treat systems with granular activated carbon or ion-exchange resins can cost millions annually. Municipalities that inherit contaminated lands (through public infrastructure, storm ponds, or water systems) face massive financial exposure.

- **Precedent Cases**: Communities near former military bases in the U.S. and Canada have already faced multi-million-dollar lawsuits and health claims linked to PFAS. The County risks being added to this list if it proceeds without due diligence.

Recommended Actions Before Approval

1. **Comprehensive PFAS Testing**

    - Conduct Phase II Environmental Site Assessment focused on PFAS at all potential source areas (firefighting training zones, fuel storage, hangars, drainage).

    - Analyze groundwater, soil, and surface water samples against Health Canada's new objective.

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2. **Independent Oversight**
    - Require testing to be carried out or peer-reviewed by an independent third-party environmental consultant, not solely the developer's team.
3. **Public Transparency**
    - Results must be disclosed to the public in plain language, with clear maps showing any areas of concern and migration risks.
4. **Risk Assessment and Remediation Plan**
    - If PFAS are detected, MECP must mandate a site-specific risk assessment and remediation plan before residential construction proceeds.
    - Institutional controls (e.g., no groundwater use) must be formally registered on title.
5. **Liability Clarity**
    - The County should require legal agreements that place the responsibility for PFAS discovery, remediation, and costs squarely on the developer.
    - MECP should confirm that if contamination is found later, the Province—not municipal taxpayers—will fund remediation.

Conclusion

Redeveloping Base31 without PFAS testing is an invitation to long-term environmental, health, and financial disaster. The science is clear: military airfields are high-risk PFAS sites. The regulatory framework is clear: redevelopment requires comprehensive environmental assessment. The risks of liability are undeniable: residents' health, property values, and municipal finances are all at stake.

For Prince Edward County Council and MECP, the path forward is simple: **pause approvals until independent PFAS testing and review are completed.** Anything less is negligence that could haunt this community for generations.

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Glossary of Publicly Available Environmental Documents

- Phase I ESA (2020, Pinchin Ltd.): Historical review identifying Areas of Potential Environmental Concern.
- Phase II ESA (2019–2020, Pinchin Ltd.): Soil and groundwater sampling, identified petroleum hydrocarbons and lead contamination.
- Supplemental Phase II ESA (2019): Additional groundwater delineation confirming limited contamination zones.
- Remediation Reports (2019–2020): Removal of three underground storage tanks and lead-contaminated soils, verification testing.
- Sensory Garden Soil Notice (2024): Public notice and testing results on localized lead from deteriorated building paint.
- Environmental Impact Study (Village A): Natural heritage/environmental assessment for planning.
- No PFAS testing has been publicly reported at Base31 to date.

Background: Base31's Military History and Proposed Development

Base31 (formerly Camp Picton) is a historic WWII-era military air training base in Prince Edward County, Ontario. The 70+ year-old site spans roughly 750 acres[1] and was used for training pilots and bombardiers in the 1940s. Over time it became the Loch-Sloy business park and a small airport, with many original hangars and buildings still on the property[2]. Now, an ambitious proposal aims to transform Base31 with **7,500 new homes** (over a 25-year plan) alongside cultural and commercial spaces[3]. This dramatic change in land use has raised **community questions about environmental contamination** on the former base[4]. Concerns stem from the site's past military activities and whether decades-old pollutants in soil or water could pose risks to future residents.

Historical Activities Linked to Contamination

The base's wartime operations and mid-20th-century practices suggest several potential contaminants:

- **Fuel and Oil Spills:** Camp Picton hosted aircraft maintenance and vehicle workshops. It was common in the 1940s to dispose of *waste oils and fluids by dumping them on the ground*, which likely occurred at this site[5]. Large volumes of aviation gasoline, lubricants, and solvents were handled on-site, and environmental controls were minimal back then. Any soil around former hangars, maintenance sheds, or fuel storage areas could have absorbed these petrochemicals over the years. In fact, a Phase I environmental assessment identified past fuel storage/use as an area of potential concern, prompting detailed testing of soil and groundwater for petroleum hydrocarbons.

- **Underground Storage Tanks (USTs):** Like many old bases, Camp Picton had underground fuel tanks. Investigations confirmed at least two USTs on the property that had been used for storing fuel[6]. Over time, such tanks can leak gasoline or diesel into surrounding soil and groundwater. Indeed, environmental testing by consultants found clear evidence of **petroleum contamination** in certain areas. For example, groundwater samples from multiple monitoring wells showed **elevated levels of gasoline-related compounds** – including petroleum hydrocarbons (PHCs in the F1/F2 fractions) and toxic additives like benzene, toluene, xylenes, naphthalene, etc.[7][8] – exceeding Ontario's environmental safety standards. These findings point to past fuel leaks impacting the subsurface.

- **Lead and Heavy Metals:** Lead was used extensively during the base's operation – in paints, aviation gasoline (which contained lead additives), and munitions. One major historical source of lead is the former *small-arms firing range* on site. Military personnel likely practiced with rifles or pistols, depositing lead bullets in a sand backstop. A soil sample from the old firing range backstop revealed **lead concentrations above regulatory standards**[9]. This is not surprising, as spent

bullets can leach lead into soil. Additionally, many buildings on base (barracks, offices, hangars) were painted with lead-based paint. Over decades, peeling or weathered paint can drop lead paint chips into the surrounding soil. An example of this came to light recently: in 2024, a *Sensory Garden* play area on Base31 (adjacent to an old building) had a **patch of soil with elevated lead**, later attributed to deteriorating lead paint on the building's exterior[10]. These findings underscore that lead is a contaminant of concern in base soils. Other heavy metals (like mercury or cadmium) could also be present in small amounts from past activities (the Picton Gazette letter to the editor noted historical use of toxic substances in an era "filled with terrible mistakes made in ignorance of the threats posed by toxic chemicals, lead, and mercury"[11]). However, lead is the primary metal that has been specifically identified through testing so far.

- **Munitions and Explosives Residues:** Camp Picton's role in bombing training means explosives were handled on site. Practice bombs were loaded onto planes and occasionally jettisoned. (Local lore even notes that *unexploded practice bombs are still embedded at nearby Wellers Bay* from WWII training runs[5], though that location is off-site.) On the base itself, there may have been ammunition storage and handling areas. While there's no public report of buried ordnance on the development lands, this history necessitates caution. Explosive residues (TNT, RDX) or perchlorate from munitions could theoretically linger in soil where bombs were stored or dismantled. That said, the known evidence of contamination at Base31 has centered more on fuels and lead rather than explosive chemicals. **Any actual ordnance or dangerous materials would likely have been cleared long ago when the site was converted to a business park, but it's an aspect for developers to verify for safety.**

- **Other Hazardous Materials:** As a mid-century military site, Base31's buildings likely contained asbestos (in insulation, siding, etc.), PCBs (in old electrical transformers or lighting ballasts), and other designated substances. These don't typically contaminate open soil unless materials were dumped or deteriorated badly, but they are a concern during renovation or demolition. For instance, before reusing any old structure, the developers have been obtaining *Designated Substances Reports* and safely removing hazards like asbestos, lead paint, and PCB-containing equipment[12]. This ensures that such materials won't pose a risk to new occupants or contractors (though it's more of an indoor air/worker safety issue than a soil contamination issue).

In summary, **the historical use of Base31 suggests the main contamination risks are from petroleum products (fuels/oils), lead (from paint and ammunition), and possibly other chemicals from wartime activities**. These are exactly the issues that recent environmental studies have targeted.

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Evidence from Environmental Studies and Cleanup Actions

Extensive environmental site assessments (ESAs) have been conducted to uncover and measure contamination at Base31. The findings provide a clearer picture of what toxins are present and what has been done about them:

- **Phase I ESA (Historical Review):** A Phase One ESA (completed in 2021 for the Base31 lands) compiled historical records, aerial photos, and site inspections. It identified several *Areas of Potential Environmental Concern* – for example, the former fuel storage areas, an old maintenance garage, the airplane refueling locations, the small-arms range, etc. The Phase I essentially flagged that due to past activities, there was a **potential for soil and groundwater contamination** in specific zones (fuel depots, the firefighting training area, the dump site if any, etc.). No actual testing is done in Phase I, but it set the stage for thorough soil and water sampling in Phase II.

- **Phase II ESA (Soil and Groundwater Testing):** Following up on the Phase I, consultants carried out multi-stage Phase II ESAs to gather hard data. In 2019, *Pinchin Ltd.* was hired (by the then-owner, Loch-Sloy Holdings) to perform test boreholes, install monitoring wells, and analyze soil and water samples across the site[13][14]. The initial Phase II and a supplemental Phase II (2019–2020) yielded concrete evidence of contamination:

- **Petroleum Hydrocarbons:** Soil and groundwater samples around the old fuel storage areas showed petroleum impacts. Most notably, **groundwater in several monitoring wells contained levels of PHCs and related chemicals above provincial standards**[7]. For instance, one well (MW5) had exceedances of gasoline-range hydrocarbons (F1 fraction), benzene, toluene, xylenes, and some petroleum-derived PAHs (like naphthalene and methylnaphthalene)[7]. Three other wells (MW101, MW102, MW103) also showed various hydrocarbon compounds over the guidelines[15]. These results confirmed that **leaked fuel had created groundwater plumes** on the site. The contamination was significant enough that Pinchin immediately recommended further investigation and eventual remediation[16].

- **Lead in Soil (Firing Range):** Soil borings were drilled in the area of the former firing range. Lab analysis found that **one borehole (BH105) had lead concentrations exceeding the applicable safety standard**[9]. This indicated that the backstop berm of the shooting range had accumulated lead from bullets. Given that finding, the environmental team included a plan to remove that contaminated soil. (Other metals in soil were generally within norms – the reports note that aside from the firing range spot, metals did not exceed criteria, so the heavy metal issue was localized to where bullets were concentrated.)

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- **Other Parameters:** The Phase II also tested for volatile organic compounds (solvents, etc.) and other chemicals in areas of concern. These did not show widespread problems – notably, no big chlorinated solvent plumes were reported, and aside from the petroleum and lead, most sampled locations met standards. This suggests that activities like parts cleaning or degreasing (which sometimes leave solvents in soil) were either not a major issue or were limited to small areas not detected in the sampling. Similarly, no mention of PCBs or other exotic contaminants was made, meaning none were found above limits in the sampled locations.

- **Remediation and Mitigation Measures:** The findings above were met with concrete cleanup actions:

- **Removal of Fuel Tanks and Contaminated Soil:** The environmental consultants identified *two old underground storage tanks* on site that were likely sources of the petroleum leaks[6]. In response, they recommended excavating these USTs along with any surrounding soil that showed fuel contamination. This recommendation was acted upon – **the tanks were removed and the polluted soil around them was dug out** in a remediation effort during 2019–2020[6][17]. After excavation, verification soil samples were collected from the pit walls/floors to ensure all the dirty soil was gone. Those post-excavation tests came back clean, indicating that the petroleum-impacted soil had been successfully removed[18]. By doing this, the site owners eliminated the primary source of ongoing groundwater pollution (no more leaky tanks) and took away soil that could continue leaching contaminants.

- **Soil Clean-up at the Firing Range:** Similarly, **lead-impacted soil at the former firing range backstop was excavated and hauled away**[17]. The removal of a likely small volume of soil (essentially the bullet-laden sand or earth) means that particular hotspot has been dealt with. Follow-up soil tests in that area confirmed that lead levels in the remaining soil now meet safety standards[19].

- **Dealing with Groundwater Contamination:** Cleaning up groundwater is more complex than excavating soil, and it often requires a combination of monitored natural attenuation or active treatment. Based on the Phase II results, Pinchin conducted additional delineation of the groundwater plume with more wells (in late 2019) to map out how far and how concentrated the contamination was[14][20]. The worst contamination was found to be fairly localized near the former fuel areas – by the time of the supplemental Phase II, **only two new wells (MW203 and MW204) still showed exceedances of petroleum chemicals like benzene, ethylbenzene and naphthalene**[21]. Pinchin reported that these remaining groundwater impacts were well delineated and limited in extent[22]. As of January 2020, the consultants concluded that **the groundwater contamination is**

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understood and confined enough to address – they recommended proceeding with a *Remedial Action Plan* targeting groundwater and/or conducting a formal *Risk Assessment* for the site[23]. In practice, this means they would either remediate the groundwater (e.g. pump-and-treat, or inject treatments to break down pollutants) **or** demonstrate via risk assessment that any residual contamination won't harm future residents (for example, if the groundwater is not used for drinking and vapour intrusion risks can be managed). Notably, by the time of these studies, Ontario's standards being applied were those for industrial/commercial land use[24]. For residential development, even stricter standards would apply, so further work (remediation or risk management) would be needed before the site is considered safe for housing. The goal will be to obtain a **Record of Site Condition** (RSC) from the province, certifying that the land meets environmental requirements for residential use. An RSC will only be granted once the Ministry of the Environment, Conservation and Parks (MECP) is satisfied that issues like the petroleum-impacted groundwater have been dealt with appropriately.

- **2024 Lead Soil Incident (Sensory Garden):** An unexpected discovery in summer 2024 highlighted another legacy pollutant. Parents of children at a Base31 summer camp were informed that a soil sample from the site's *Sensory Garden* (a landscaped play area near Building #3) had come back with **elevated lead levels**[25]. This isolated patch of soil, located at the corner where an old wooden fence meets the building, exceeded provincial lead limits – presumably due to flakes of *lead-based paint* that had fallen off the exterior of Building 3 and into the soil over many years[26]. Once this was detected, Base31 and local authorities took immediate precautions:

- Hastings Prince Edward Public Health issued a Community Health Protection Order on August 2, 2024, formally acknowledging the lead hotspot as a health risk that needed addressing[27]. However, Public Health experts did not require the entire Sensory Garden to close, since the lead was confined to specific spots along the building's perimeter[28].

- Base31 staff followed health guidance by installing a sturdy fence to cordon off the affected soil and adding extra ground cover, preventing any contact with that corner area[29][26]. They also posted public notices at the garden and emailed anyone who had been in the Sensory Garden about the situation[30].

- Comprehensive follow-up testing was done in August 2024 on soil *throughout the Sensory Garden*, including interior play areas, to see if any other spots had high lead. The results were reassuring: no other soil samples exceeded acceptable lead levels, and the lead contamination was *fully contained* within the originally

identified fenced-off area[31]. In other words, the problem did not appear to be widespread – it was likely a localized case of paint chips right up against Building 3.

- With that knowledge, Base31 worked with environmental experts over fall/winter 2024 to craft a **remediation plan to remove the lead-contaminated soil** in the fenced zone. By March 2025, they announced that the plan had been approved by both the MECP and Public Health Ontario, who "expressed they were pleased with the remediation approach and raised no concerns"[32]. The actual cleanup (digging out the leaded soil and disposing of it) was scheduled for spring 2025, in time for the summer season.

- This incident, while unfortunate, demonstrated the site management's responsiveness and also served as a reminder that *lead paint on old structures is a real hazard*. Going forward, any renovations on Base31's heritage buildings will continue to include lead paint abatement. For the new residential portions, the old buildings aren't directly in those new neighborhoods, but if any are repurposed (say, as community centers or lofts), they'll be stripped of lead paint and asbestos beforehand. **No new homes will be built in the exact area of the Sensory Garden lead incident until that soil is remediated**, and since it's a small contained area, it should be fully resolved by now (mid-2025).

- **Ongoing Monitoring and Future Assessments:** It's worth noting that environmental remediation at a site this large is an ongoing process. The developers have committed to further studies as needed. For example, before any *new construction phase*, they must ensure that area is characterized. Residents at a public meeting in 2023 were adamant that "a professional soil assessment study at Base31" be completed **"throughout the base" before any building begins**, to avoid nasty surprises[11]. Officials have echoed that sentiment. We can expect **Phase II ESAs to be repeated or extended** into areas that haven't been sampled yet (e.g. if development moves to a different section of the 304 ha property, they'll test there too). Additionally, the County's planning approvals and any Minister's Zoning Orders for the project are contingent on meeting environmental safety requirements – contamination was explicitly one of the concerns raised in the planning process[4]. All of this means that evidence collection and review is iterative: *identify contaminants -> remediate -> test again -> and so forth*, under regulatory oversight.

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What Should Potential Residents Be Concerned About?

For future homeowners and residents at Base31, the prospect of living on a former military airfield can understandably raise some red flags. The good news is that a lot of investigation and cleanup has been done, as described above. However, **prospective residents should remain informed and vigilant** about a few key issues:

- **Completion of Remediation and Certification:** One of the first questions to ask is whether the site (or the phase of the site you're moving into) has obtained a **Record of Site Condition (RSC)** for residential use. An RSC is a formal sign-off by environmental authorities that the land has been cleaned up or risk-managed to be safe for housing. It is only granted after required soil and groundwater criteria are met. Potential residents should be concerned if an RSC has not been filed, because that would imply remediation is still underway or incomplete. In the case of Base31, the developers will likely file RSCs in stages (as they finish cleaning different parcels). *Bottom line:* **Before homes are occupied, ensure the developer has provided proof of environmental clearance** – either via an RSC or equivalent documentation – indicating that soil and groundwater meet residential standards (or that any remaining contaminants are under control via a risk assessment)[23]. This gives peace of mind that independent experts have vetted the site's safety.

- **Soil Quality in Yards and Parks:** Families moving in will care about the dirt under their feet – where kids play, gardens grow, pets dig, etc. Given the base's history, residents should verify that **any soil in residential yards or community parks is clean**. All indications so far are that contaminated soils (around tanks, the firing range, and the lead patch) have been excavated and removed[17]. Additionally, extensive soil sampling did not reveal other widespread issues beyond those hotspots. However, it's wise to ask the developer or municipality: *Have all areas been tested?* For instance, if a particular section of the property wasn't used intensely in the past (say open field), it's probably fine – but if it hosted, for example, an old garbage dump or a motor pool, one would want to see test results from there. Potential residents might request a summary of Phase II ESA results for the specific subdivision or "village" they'll live in. If anything was found, they should ask *how it was dealt with*. Fortunately, the evidence so far (post-remediation verification samples) indicates that **soil at the site, after cleanup, meets environmental standards**[18]. Remaining vigilant, however, is smart – especially during construction. If during digging for foundations workers encounter odd barrels, stained soil, or chemical odors (unlikely but possible on an old base), work should pause and the material be tested. Residents-to-be can keep an eye on environmental reports or construction updates published by Base31.

- **Groundwater Contamination and Drinking Water:** Another concern is **water quality**, especially since fuel-related chemicals were found in groundwater on the

site[7]. The planned development, however, will be on **municipal water supply**, not well water, which greatly reduces direct risk. So even though some groundwater on site has/had benzene and other contaminants, no one will be drinking it or using it for bathing once homes are hooked to the town water mains. That said, groundwater contamination can pose *indirect* risks. One is through **vapor intrusion**: for example, if a significant pocket of gasoline remains under the ground, the vapors (containing benzene) could potentially seep up through soil into basements or crawlspaces of houses. This is a known concern in redevelopment of old gas station sites. In the Base31 case, the main groundwater impact was near former fuel tanks. By removing those tanks and the source soil, the chances of high vapor levels have dropped. Moreover, if any moderate contamination remains, engineers can install vapor mitigation (such as ventilated foundations or vapor barriers) under new buildings as a precaution.

Prospective residents should ask whether a vapor intrusion risk assessment was done and if any preventive measures (like sub-slab membranes or venting systems) were deemed necessary in the construction of homes near the former fuel areas. Given that Pinchin recommended a Risk Assessment for the site[23], it's likely that vapor pathways would be evaluated in that process. If the risk assessment finds that vapors are negligible or manageable, that should be documented. Additionally, residents can be concerned about whether any contaminated groundwater could migrate off-site or into the environment (for example, into nearby Marsh Creek or other groundwater users). Here, the delineation study suggests the plume is contained on-site and is being addressed[22]. Many developments in Ontario build on sites with some groundwater impacts by using risk management (like restrictive covenants not to use groundwater, ongoing monitoring, etc.). As a resident, you'd want transparency on what restrictions or monitoring programs will be in place. If, for instance, sump pumps in basements need special handling because of groundwater contamination, that's something to know (though this is an unlikely scenario in this case).

- **Lead and Other Heavy Metals:** The discovery of lead near Building 3 was a reminder that lead can lurk in unexpected corners. Prospective residents should be aware if any other **lead hotspots** remain. Are there other old structures with peeling paint where children might play nearby? The Sensory Garden incident was handled by isolating and planning removal[29][27]. One would hope that *before* homes are built in proximity to any remaining WWII-era buildings, those structures will either be remediated or removed. **If your home is near an old building that has not yet been renovated, it's worth confirming that the soil around it was tested for lead (and cleaned if necessary)**. Also, if the development includes community gardens, the soil used should be tested for metals to ensure it's safe for growing vegetables. Given the thoroughness of the environmental work so far, it's likely the developers

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will import clean topsoil for landscaping as needed. Still, residents should feel empowered to ask for information on this. It's also good to know that lead in drinking water won't be an issue – since new housing uses new plumbing, there won't be lead pipes, and the municipal supply is treated and monitored. So the main exposure route for lead would be via soil/dust, which is mitigated by the cleanup efforts.

- **Unexpected Legacy Waste:** Large properties like Camp Picton sometimes had informal dump areas for garbage or even hazardous waste (old drums of chemicals, etc.). The Phase I ESA would have looked for signs of any on-site landfills or pits. If you're a potential resident, you might ask: *Was there an old dumping ground identified, and if so, was it cleaned up?* One clue is that no major issues aside from the ones noted have come up in reports, so likely there wasn't a dramatic toxic dumpsite. (The base was relatively small in operations; many military bases have a known "dry dump" or landfill, but if it existed here it has not been flagged publicly.) Nonetheless, this is part of doing due diligence as a homebuyer on a redeveloped site. **The good news**: when the County and Province reviewed the Base31 development proposal, they acknowledged "possible site contamination" and would not permit residential building on unsafe land[4]. So there is a regulatory safety net. But it's wise for residents to personally be aware of the site's history in the exact spot of their home.

- **Construction Phase Disturbances:** Another consideration for those who will live at Base31 during the multi-year build-out is the handling of soils during construction. If you move into Phase 1 while Phase 2 is still being built next door, you'd want reassurance that any soil being excavated and moved around is being managed properly. Dust control is not just a nuisance issue but a health one if any contaminated dust were generated. The developers should adhere to Ontario's *Excess Soil Regulations*, which require testing and proper disposal of excavated soil.

  Residents can pay attention to environmental management plans during construction, ensuring, for example, that trucks hauling soil off-site are covered and that soil stockpiles (if any) are tested and secured.

  This prevents any contaminated soil from blowing around or being unknowingly spread into clean areas – a scenario the Picton Gazette letter warned about by citing the example of Port Hope's historic radioactive soil issue[33]. Essentially, each phase of development should isolate and address any contamination encountered, rather than mixing it into the environment. The community and future residents have every right to expect transparency on this process.

Readers would know how lax enforcement of truck hauling gravel is on hwy 401. It is not uncommon to see covers flailing in the wind with damage to windshields of traffic behind these trucks.

- **Communication and Transparency:** Finally, potential residents should be concerned with **staying informed**. The Base31 developers have been putting out updates (e.g., blog posts about the Sensory Garden lead issue and its resolution[32][31]). The municipality also publicly posted technical reports like the Phase II ESA on its website for residents to review. This level of transparency is reassuring and should continue. If you're buying a home, don't hesitate to ask the developer for the environmental background of your lot. They should be able to tell you, for instance, "Your house sits where a barracks used to be – we tested the soil and it was fine" or "This area was farmland and had no contamination issues in our studies." **A well-informed resident is an empowered resident**. Knowing the history and seeing the data can greatly reduce fear of the unknown. After all, the goal of all these investigations and cleanup efforts is to ensure the new neighborhood is safe and healthy for families.

Conclusion

In summary, there is evidence that Base31's decades as a military base left behind contaminants – but there is also a record of these issues being investigated and addressed. Key findings include fuel hydrocarbons in soil and groundwater from old fuel tanks, and lead in certain soils from bullets and paint. These problems have not been ignored. On the contrary, environmental professionals have *collected soil and water samples, identified exceedances, and implemented remediation measures* like tank removal, soil excavation, and targeted cleanups[17][22]. Ongoing monitoring and risk assessment are part of the plan to ensure the site is safe for its future as a residential community.

For potential residents, the main takeaway is to remain aware and engaged. **Demand documentation of the cleanup,** and confirm that the property has received environmental clearance for residential use. The developers and regulators know what's at stake – nobody wants to repeat past mistakes by unknowingly exposing families to toxic substances in their yards[34]. In fact, community members have been vocal about preventing any such scenario, insisting on comprehensive soil studies and precautions[11]. If you do your due diligence (and perhaps even connect with local environmental groups or follow municipal reports), you can make an informed decision about living at Base31.

Prince Edward County is turning this once-restricted airfield into a place for homes, parks, and businesses. With careful remediation and oversight, Base31 can shed its polluted legacy.

CountyFirst.ca

Prospective residents should be confident that concerns are being addressed – but they should also verify that for themselves through the available evidence and reports. By understanding the history and the cleanup efforts, you can move into Base31 with your eyes open, knowing that the ground beneath your home has been scrutinized and, where needed, made clean. Environmental due diligence isn't just a bureaucratic requirement; it's a vital step to protect the health of the new community. And from all indications, that process is well underway at Base31[32][23], paving the way for a safe and successful transformation of this historic site.

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[1] [3] [4] Base31 development plans come with many questions from residents : Prince Edward County News countylive.ca

https://www.countylive.ca/base31-development-plans-come-with-many-questions-from-residents/

[2] [6] [7] [8] [9] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] Phase II ESA Stage 2 PSI Report

https://www.thecounty.ca/wp-content/uploads/2024/12/Phase-II-ESA-Report-Base-31-Apartment-Building.pdf

[5] [11] [33] [34] Camp Picton soil could be contaminated - Picton Gazette | The Picton Gazette

https://pictongazette.ca/post/letter

[10] [12] [26] [27] [28] [29] [30] [31] [32] Sensory Garden Notice | Base31

https://base31.ca/sensory-garden-notice/

[25] Elevated lead levels found in soil sample at Base31 - Picton Gazette

https://pictongazette.ca/post/elevated-lead-levels-found-in-soil-sample-at-base31

Contamination at Base31

Historical Use and Evidence

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This report has been prepared for **informational and advocacy purposes only.** It summarizes publicly available information, general scientific knowledge, and reasonable concerns related to potential PFAS (per- and polyfluoroalkyl substances) contamination at Base31 in Prince Edward County. The authors are **not providing legal, environmental engineering, or health advice.** Readers should not rely solely on this report for decision-making. Instead, they should seek independent professional advice from qualified environmental consultants, legal counsel, and public health authorities before taking any action or making investment or policy decisions. While every effort has been made to ensure the accuracy of the information presented, the authors make **no representation or warranty, express or implied,** regarding the completeness, accuracy, reliability, or suitability of the information contained in this report. The information is subject to change as new studies, data, or regulatory standards become available. By reviewing this report, the reader agrees that the authors, contributors, and publishers shall **not be liable for any direct, indirect, incidental, or consequential damages** arising from the use of, or reliance upon, the information contained herein. Any references to environmental or health risks are **general in nature** and do not constitute a site-specific risk assessment. Only a licensed environmental professional can determine site conditions through recognized investigative procedures. The opinions expressed are those of the authors in the context of civic dialogue. Readers are encouraged to consult the Ministry of the Environment, Conservation and Parks (MECP), the Municipality of Prince Edward County, and qualified experts for authoritative information and regulatory guidance.