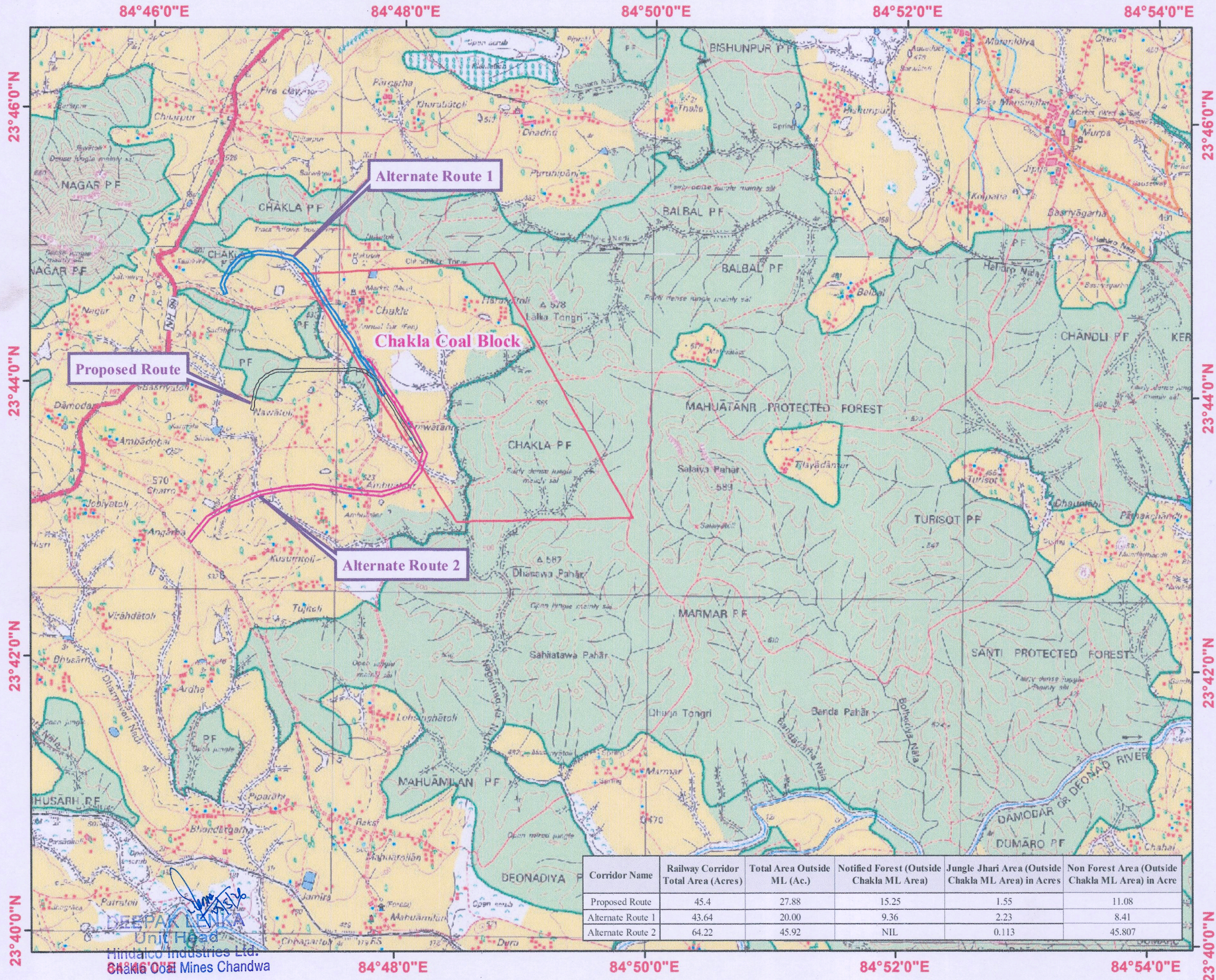
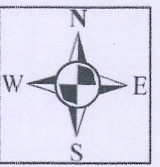


# TOPOSHEET MAP SHOWING ALTERNATE ROUTE 1 & ALTERNATE ROUTE 2 OF RAIL CORRIDOR FOR CHAKLA COAL BLOCK OF HINDALCO INDUSTRIES LIMITED



## Toposheet Index

|       |       |       |
|-------|-------|-------|
| 73A09 | 73A13 | 73E01 |
| 73A10 | 73A14 | 73E02 |
| 73A11 | 73A15 | 73E03 |

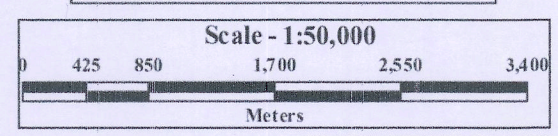
|  |  |
|--|--|
| Express highway: with toll; with bridge; with distance stone         |  |
| Roads, metalled: according to importance                             |  |
| Roads, double carriageway: according to importance                   |  |
| Unmetalled road: Cart-track, Pack-track with pass, Foot-path         |  |
| Streams: with track in bed, undefined, Canal                         |  |
| Dams: masonry or rock-filled, earthwork, Weir                        |  |
| River: dry with water channel, with island & rocks, Tidal river      |  |
| Submerged rocks, Shoal, Swamp, Reeds                                 |  |
| Wells: lined, unlined, Tube-well, Spring, Tanks: perennial, dry      |  |
| Embankments: road or rail, tank, Broken ground                       |  |
| Railways, broad gauge: double, single with station, under constn     |  |
| Railways, other gauges: double, single with distance stone, do       |  |
| Mineral line or tramway, Kin, Cutting with tunnel                    |  |
| Contours with sub-features: Rocky slopes, Cliffs                     |  |
| Sand features: (1)flat, (2)sand-hills(permanent), (3)dunes(shifting) |  |
| Towns or Villages: inhabited, deserted, Fort                         |  |
| Huts: permanent, temporary, Tower, Antiquities                       |  |
| Temple, Chhatra, Church, Mosque, Idgah, Tomb, Graves                 |  |
| Lighthouse, Lightship, Buoys: lighted, unlighted, Anchorage          |  |
| Mine: Vine on trestle, Grass, Scrub                                  |  |
| Palms: palmyra, other; Plantain, Conifer, Bamboo, Other trees        |  |
| Areas: cultivated, wooded, Surveyed tree                             |  |
| Boundary, international  |  |
| state: demarcated, undemarcated                                      |  |
| district, subdivision, tahsil or tehsil, forest                      |  |
| Boundary pillars: surveyed, unlocated                                |  |
| Heights, triangulated: station, point, approximate                   |  |
| Bench-mark: geodetic, tertiary, canal                                |  |
| Post office, Telegraph office, Overhead tank                         |  |
| Rest house or inspection bungalow, Circuit house, Police station     |  |
| Camping ground, Forest: reserved, protected                          |  |
| Spaced names: administrative, locality or tribal                     |  |
| Hospital, Dispensary, Veterinary Hospital / Dispensary               |  |
| Aerodrome, Helipad, Tourist site                                     |  |
| Power line: with pylons surveyed, with poles unsurveyed              |  |

| Toposheet Map No | Projection   | Datam    |
|------------------|--------------|----------|
| 73A13, 73A14     | UTM Zone 45N | WGS 1984 |

## Legend

- Proposed Route
- Alternate Route 1
- Alternate Route 2
- Chakla Coal Block

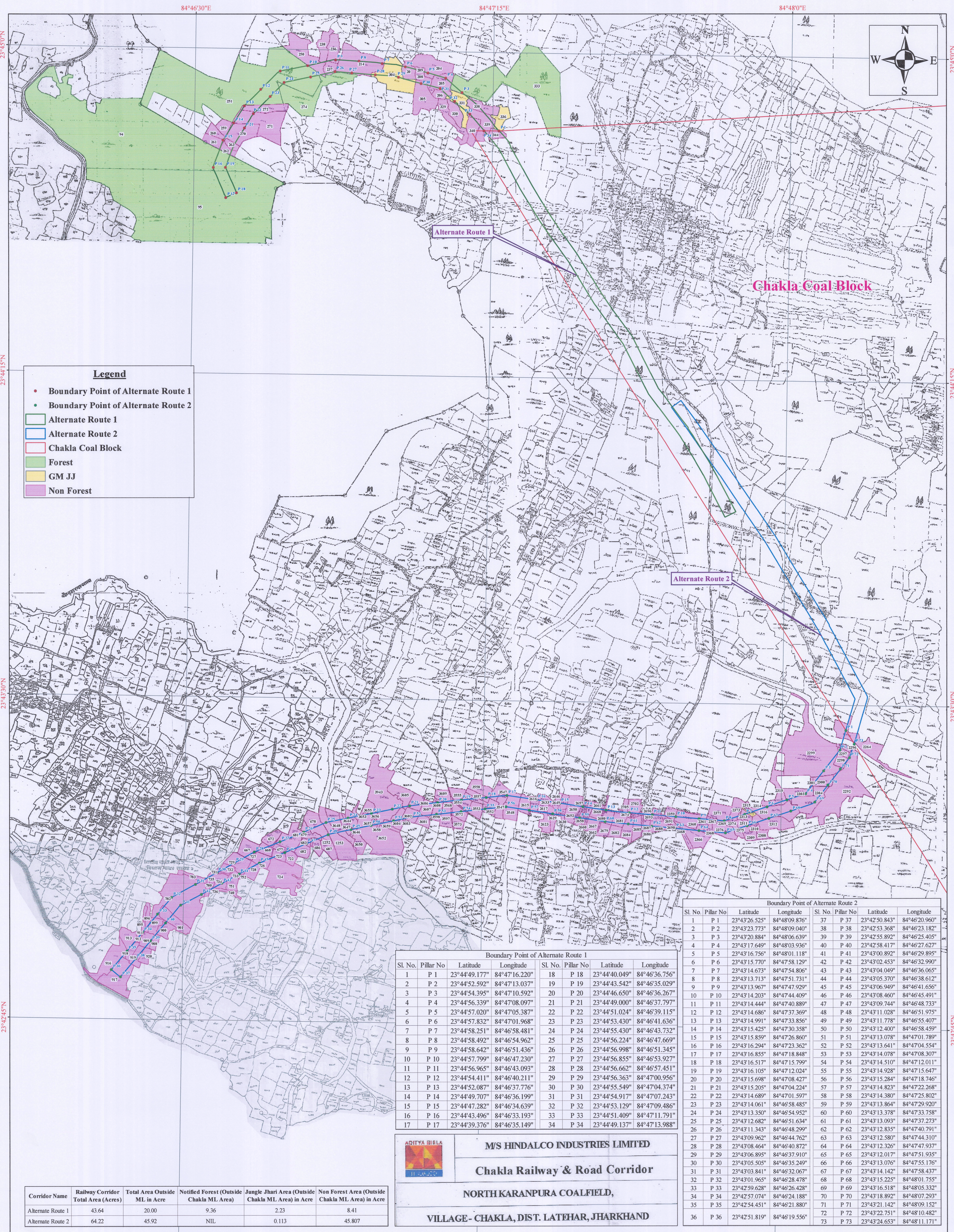
| Corridor Name     | Railway Corridor Total Area (Acres) | Total Area Outside ML (Ac.) | Notified Forest (Outside Chakla ML Area) | Jungle Jhari Area (Outside Chakla ML Area) in Acres | Non Forest Area (Outside Chakla ML Area) in Acre |
|-------------------|-------------------------------------|-----------------------------|--|---|--|
| Proposed Route    | 45.4                                | 27.88                       | 15.25                                    | 1.55  | 11.08  |
| Alternate Route 1 | 43.64                               | 20.00                       | 9.36                                     | 2.23  | 8.41   |
| Alternate Route 2 | 64.22                               | 45.92                       | NIL                                      | 0.113   | 45.807   |



Survey & Mapping By : Sargeo Enterprises, Ranchi, Jharkhand. Printed On : 18.02.2023.

Hindalco Industries Ltd. CHAKLA COAL Mines Chandwa

# DGPS MAP SHOWING ALTERNATE ROUTE 1 & ALTERNATE ROUTE 2 OF RAIL CORRIDOR FOR CHAKLA COAL BLOCK OF HINDALCO INDUSTRIES LIMITED



**Legend**

- Boundary Point of Alternate Route 1
- Boundary Point of Alternate Route 2
- Alternate Route 1
- Alternate Route 2
- Chakla Coal Block
- Forest
- GM JJ
- Non Forest

**Boundary Point of Alternate Route 1**

| Sl. No. | Pillar No. | Latitude      | Longitude     | Sl. No. | Pillar No. | Latitude      | Longitude     |
|---------|------------|---------------|---------------|---------|------------|---------------|---------------|
| 1       | P 1        | 23°44'49.177" | 84°47'16.220" | 18      | P 18       | 23°44'40.049" | 84°46'36.756" |
| 2       | P 2        | 23°44'52.592" | 84°47'13.037" | 19      | P 19       | 23°44'43.542" | 84°46'35.029" |
| 3       | P 3        | 23°44'54.395" | 84°47'10.592" | 20      | P 20       | 23°44'46.650" | 84°46'36.267" |
| 4       | P 4        | 23°44'56.339" | 84°47'08.097" | 21      | P 21       | 23°44'49.000" | 84°46'37.797" |
| 5       | P 5        | 23°44'57.020" | 84°47'05.387" | 22      | P 22       | 23°44'51.024" | 84°46'39.115" |
| 6       | P 6        | 23°44'57.832" | 84°47'01.968" | 23      | P 23       | 23°44'53.430" | 84°46'41.636" |
| 7       | P 7        | 23°44'58.251" | 84°46'58.481" | 24      | P 24       | 23°44'55.430" | 84°46'43.732" |
| 8       | P 8        | 23°44'58.492" | 84°46'54.962" | 25      | P 25       | 23°44'56.224" | 84°46'47.669" |
| 9       | P 9        | 23°44'58.642" | 84°46'51.436" | 26      | P 26       | 23°44'56.998" | 84°46'51.345" |
| 10      | P 10       | 23°44'57.799" | 84°46'47.230" | 27      | P 27       | 23°44'56.855" | 84°46'53.927" |
| 11      | P 11       | 23°44'56.965" | 84°46'43.093" | 28      | P 28       | 23°44'56.662" | 84°46'57.451" |
| 12      | P 12       | 23°44'54.411" | 84°46'40.211" | 29      | P 29       | 23°44'56.363" | 84°47'00.956" |
| 13      | P 13       | 23°44'52.087" | 84°46'37.776" | 30      | P 30       | 23°44'55.549" | 84°47'04.374" |
| 14      | P 14       | 23°44'49.707" | 84°46'36.199" | 31      | P 31       | 23°44'54.917" | 84°47'07.243" |
| 15      | P 15       | 23°44'47.282" | 84°46'34.639" | 32      | P 32       | 23°44'53.129" | 84°47'09.486" |
| 16      | P 16       | 23°44'43.496" | 84°46'33.193" | 33      | P 33       | 23°44'51.409" | 84°47'11.791" |
| 17      | P 17       | 23°44'39.376" | 84°46'35.149" | 34      | P 34       | 23°44'49.137" | 84°47'13.988" |

**Boundary Point of Alternate Route 2**

| Sl. No. | Pillar No. | Latitude      | Longitude     | Sl. No. | Pillar No. | Latitude      | Longitude     |
|---------|------------|---------------|---------------|---------|------------|---------------|---------------|
| 1       | P 1        | 23°43'26.525" | 84°48'09.876" | 37      | P 37       | 23°42'50.843" | 84°46'20.960" |
| 2       | P 2        | 23°43'23.773" | 84°48'09.040" | 38      | P 38       | 23°42'53.368" | 84°46'23.182" |
| 3       | P 3        | 23°43'20.884" | 84°48'06.639" | 39      | P 39       | 23°42'55.892" | 84°46'25.405" |
| 4       | P 4        | 23°43'17.649" | 84°48'03.936" | 40      | P 40       | 23°42'58.417" | 84°46'27.627" |
| 5       | P 5        | 23°43'16.756" | 84°48'01.118" | 41      | P 41       | 23°43'00.892" | 84°46'29.895" |
| 6       | P 6        | 23°43'15.770" | 84°47'58.129" | 42      | P 42       | 23°43'02.453" | 84°46'32.990" |
| 7       | P 7        | 23°43'14.673" | 84°47'54.806" | 43      | P 43       | 23°43'04.049" | 84°46'36.065" |
| 8       | P 8        | 23°43'13.713" | 84°47'51.731" | 44      | P 44       | 23°43'05.370" | 84°46'38.612" |
| 9       | P 9        | 23°43'13.967" | 84°47'47.929" | 45      | P 45       | 23°43'06.949" | 84°46'41.656" |
| 10      | P 10       | 23°43'14.203" | 84°47'44.409" | 46      | P 46       | 23°43'08.460" | 84°46'45.491" |
| 11      | P 11       | 23°43'14.444" | 84°47'40.889" | 47      | P 47       | 23°43'09.744" | 84°46'48.733" |
| 12      | P 12       | 23°43'14.686" | 84°47'37.369" | 48      | P 48       | 23°43'11.028" | 84°46'51.975" |
| 13      | P 13       | 23°43'14.991" | 84°47'33.856" | 49      | P 49       | 23°43'12.400" | 84°46'55.407" |
| 14      | P 14       | 23°43'15.425" | 84°47'30.358" | 50      | P 50       | 23°43'13.841" | 84°46'58.459" |
| 15      | P 15       | 23°43'15.859" | 84°47'26.860" | 51      | P 51       | 23°43'15.284" | 84°47'01.789" |
| 16      | P 16       | 23°43'16.294" | 84°47'23.362" | 52      | P 52       | 23°43'16.727" | 84°47'04.554" |
| 17      | P 17       | 23°43'16.855" | 84°47'18.848" | 53      | P 53       | 23°43'18.170" | 84°47'08.307" |
| 18      | P 18       | 23°43'16.517" | 84°47'15.799" | 54      | P 54       | 23°43'19.613" | 84°47'12.011" |
| 19      | P 19       | 23°43'16.105" | 84°47'12.024" | 55      | P 55       | 23°43'21.056" | 84°47'15.647" |
| 20      | P 20       | 23°43'15.698" | 84°47'08.427" | 56      | P 56       | 23°43'22.500" | 84°47'18.746" |
| 21      | P 21       | 23°43'15.205" | 84°47'04.224" | 57      | P 57       | 23°43'23.943" | 84°47'22.688" |
| 22      | P 22       | 23°43'14.689" | 84°47'00.597" | 58      | P 58       | 23°43'25.387" | 84°47'26.630" |
| 23      | P 23       | 23°43'14.061" | 84°46'58.485" | 59      | P 59       | 23°43'26.830" | 84°47'30.572" |
| 24      | P 24       | 23°43'13.350" | 84°46'54.952" | 60      | P 60       | 23°43'28.274" | 84°47'34.514" |
| 25      | P 25       | 23°43'12.682" | 84°46'51.634" | 61      | P 61       | 23°43'29.718" | 84°47'38.456" |
| 26      | P 26       | 23°43'11.343" | 84°46'48.299" | 62      | P 62       | 23°43'31.162" | 84°47'42.400" |
| 27      | P 27       | 23°43'09.962" | 84°46'44.762" | 63      | P 63       | 23°43'32.606" | 84°47'46.344" |
| 28      | P 28       | 23°43'08.464" | 84°46'40.872" | 64      | P 64       | 23°43'34.050" | 84°47'50.288" |
| 29      | P 29       | 23°43'06.895" | 84°46'37.910" | 65      | P 65       | 23°43'35.494" | 84°47'54.232" |
| 30      | P 30       | 23°43'05.505" | 84°46'35.249" | 66      | P 66       | 23°43'36.938" | 84°47'58.176" |
| 31      | P 31       | 23°43'03.841" | 84°46'32.067" | 67      | P 67       | 23°43'38.382" | 84°48'02.120" |
| 32      | P 32       | 23°43'01.965" | 84°46'28.478" | 68      | P 68       | 23°43'39.826" | 84°48'06.064" |
| 33      | P 33       | 23°42'59.628" | 84°46'26.428" | 69      | P 69       | 23°43'41.270" | 84°48'09.908" |
| 34      | P 34       | 23°42'57.074" | 84°46'24.188" | 70      | P 70       | 23°43'42.714" | 84°48'13.852" |
| 35      | P 35       | 23°42'54.451" | 84°46'21.880" | 71      | P 71       | 23°43'44.158" | 84°48'17.796" |
| 36      | P 36       | 23°42'51.819" | 84°46'19.556" | 72      | P 72       | 23°43'45.602" | 84°48'21.740" |
|         |            |               |               | 73      | P 73       | 23°43'47.046" | 84°48'25.684" |

**M/S HINDALCO INDUSTRIES LIMITED**  
**Chakla Railway & Road Corridor**  
**NORTH KARANPURA COALFIELD,**  
**VILLAGE - CHAKLA, DIST. LATEHAR, JHARKHAND**

| Corridor Name     | Railway Corridor Total Area (Acres) | Total Area Outside ML in Acre | Notified Forest (Outside Chakla ML Area) | Jungle Jhari Area (Outside Chakla ML Area) in Acre | Non Forest Area (Outside Chakla ML Area) in Acre |
|-------------------|-------------------------------------|-------------------------------|--|--|--|
| Alternate Route 1 | 43.64                               | 20.00                         | 9.36                                     | 2.23   | 8.41   |
| Alternate Route 2 | 64.22                               | 45.92                         | NIL                                      | 0.113  | 45.807   |

**Survey & Mapping By :**  
**Sargeo Enterprises**  
 Ranchi, Jharkhand  
 Printed On : 18.02.2023

For SARGEEO ENTERPRISES  
 Digitized Signature

**Scale - 1:5,000**

Meters

**DEEPAK KANKA**  
 Unit In-charge  
 Hindalco Industries Ltd.  
 Chakla Coal Mines Chordra

NOTES